IL-15-20

M E M O R A N D U M

DATE: September 17, 1974

TO: Legal Services / DAPC

FROM: M. Paul Schmierbach - Region 5

SUBJECT: WILLIAMSON COUNTY -- Marion; Olin Corporation, PCB74-335; Variance Extension

I.D. #199 862 AAB

CHECKLIST INFORMATION

1.0 Full Name & Address of Petitioner: Olin Corporation
Marion, Illinois 62959

2.0 Location of Emission Source: Ordill Area
WILLIAMSON COUNTY
Marion, Illinois
I.D. #199 862 AAB

3.0 Description of General Facility, Emission Source & Process Involved Regarding Variance:

3.1 General Description - The variance request is for the continued operation of an incinerator which was developed specifically for the disposal of powder and pyrotechnic wastes. The incinerator is equipped with a venturi scrubber and a water separator cyclone.

3.2 Type and quantity of raw materials used - The incinerator is used to dispose of manufacturing scrap.

3.3 Flow Chart - See pictures.

4.0 Historical Background

4.1 Previous Variances - Olin was granted a variance from the Air Pollution Control Board (67-60) in 1967. Variances have been granted since that time until present --

PCB71-60
PCB71-371
PCB72-357
PCB72-517

The most recent variance was PCB73-395, granted until December 13, 1974.

4.0 Historical Background (cont'd.)

4.2 Previous Board Enforcement Actions - None.

4.3 Pending Enforcement Action not at Board - None.

4.4 Previous Agency Contact - Not applicable.

4.5 Permit Status - Permits have been granted for the incinerator and expire December 13, 1974.

4.6 Past Compliance Performance - Olin has been faithful in their efforts to comply with provisions of previously granted variances.

5.0 Specific Extent of Relief Sought

5.1 Rule and/or Regulation

Rule 203(e)
Rule 206(b)
Rule 103
Rule 104
or
* Rule 502 and Section 9(c)

* Apparent mistake -- should be 505.

5.2 Time Period of Requested Variance - One year.

6.0 Specific Dates and Times of Investigations: September 12, 1974.

7.0 Weather Conditions: Not applicable.

8.0 Names and Titles of All Persons Contacted at the Facility on Each Date of Investigation:

Mr. Richard Altekruse, Manager, Propellant Development.

9.0 Nature and Content of all discussions held between the Engineer and the Petitioner or his Agent:

I discussed with Mr. Altekruse the current operational procedures associated with the use of the incinerator. Mr. Altekruse indicated that the incinerator was being operated on a two-day/week basis and that, since May of 1974, they had not had any recurring problems similar to the explosion which had taken place.

9.0 Nature and Content of all discussions held between the Engineer and the Petitioner or his Agent (cont'd.):

Mr. Altekruse and I discussed, at some length, the Olin proposal for a rule change regarding the incinerator and the recent meeting which Olin had with our Standards and Permit Sections regarding the rule change. I informed Mr. Altekruse that the Board's power to grant variances would be terminated in May 1975 and that an extension of the variance for one year would be improbable.

During the investigation of the previous variance (Sept. 26, 1973), I questioned Mr. Altekruse with regard to the date when a proposed rule change would be submitted to the Pollution Control Board. Mr. Altekruse, at that time, indicated that he felt three (3) months would be sufficient time in which to prepare the proposal and submit it to the Board. It was in light of this statement that my recommendation was for a continued variance. I questioned Mr. Altekruse concerning the reasons for the delay and was informed that Olin had submitted a rule change proposal to the Agency in November 1973 and had not received comments on the proposal until August 16, 1974. I informed Mr. Altekruse that it was my opinion that Olin had secured a reasonable amount of time to make whatever proposed rule change they anticipated and that I would be opposed to continuing this variance without a proposed rule change in the hands of the Pollution Control Board.

10.0 Emissions (type, i.e. particulates, SO_2, etc.) Subject of Variance:

Particulates and Carbon monoxide.

12.0 Proposed Control Program - None.

12.1 Description and analysis - Not applicable.

12.11 Type of control program - Not applicable.

12.12 Cost of control program - Not applicable.

12.13 Proposed time schedule for compliance - Not applicable.

12.14 Construction permit status - Not applicable.

12.15 Proposed control equipment efficiency - Not applicable.

12.16 Will regulation be met by proposed control equipment - Not applicable.

12.2 Time schedule

12.21 Reasonableness of time schedule - Not applicable.

12.22 If unreasonable, alternatives and source of alternatives include milestones - The only alternative to the proposed rule change would be the installation of further control equipment, such as an afterburner.

13.0 Description of Area in which emission source is located

13.1 Map (if available) and description of area - Olin is located in a strip-mined area, approximately one mile north of Route 13 and one mile west of Route 57, near Marion.

13.2 Density of Population and distance and direction of nearest residence - Marion is approximately 1.5 miles from the burning site and has a population of approximately 13,000. The nearest residence is approximately one-half mile north of Olin.

13.3 Other similar emission sources - No other similar emission source is in the area except for an experimental incinerator being developed by Olin to detonate 20mm shells.

13.4 Air quality - from nearest reporting station and location of such station, and distance to source and comparison to ambient air quality standards - The nearest reporting station is at the Marion Regional Office Bldg., approximately two miles southeast of the open burning site. Air quality at the station shows levels which are generally within the national primary ambient air quality standards.

11.0 Emissions

11.1 Quantity

* 11.11 Calculated

.0404 grains/scf @ .04% CO_2
3570 scfm
7000 grains/lb.

$$\frac{.0404 \text{ grains/scf} \times 3570 \text{ scfm} \times 60 \text{ min/hr.}}{7000 \text{ grains/lb.}} = 1.2 \text{ lbs/hr.}$$

$$\frac{.0404 \text{ grains/scf} \times 3570 \text{ scfm} \times 60 \text{ min/hr.}}{373 \text{ lbs. charged/hr.}} = 23.2 \text{ gr/lb. charged}$$

@ 12% CO_2
1.21 gr/scfm

$$\frac{1.21 \text{ gr.} \times 3570 \text{ scfm} \times 60 \text{ min/hr.}}{7000 \text{ grains/lb.}} = 37 \text{ lbs/hr.}$$

11.12 Allowable

Particulate
Rule 203(e)(4)

.1 grains/scf corrected to 12% CO_2

Carbon Monoxide
Rule 206(b)

500ppm @ 50% excess air

11.2 Tested - Dr. Howard Hesketh, March 15, 1971.

11.3 Present control equipment or programs

11.31 Efficiency - 99.8%.

11.32 Needed efficiency to achieve compliance - Not applicable.

11.33 Itemization of existing operational, maintenance and housekeeping deficiencies - None.

* Per March 15, 1971 stack test.

11.3 Present control equipment or programs (cont'd.)

11.34 Sensory perception of engineers - A slight visual emission is noted during the operation of the incinerator; estimated opacity is 5% - 10%.

13.0 Description of area in which emission source is located (cont'd.)

13.5 Additional analytical analysis - None.

14.0 Report of Persons Living in the Area: No interviews were conducted with persons living in the area, since the Agency has not had complaints from these residents on previous investigation interviews.

15.0 Inury to the Public

15.1 Toxicity - Not applicable.

15.2 Odor - Not applicable.

15.3 Degree of Unreasonable Interference - Not applicable.

16.0 Arbitrary and Unreasonable Hardship

16.1 State of Hardship claimed by Company - Olin claims that extended storage of scrap materials generated in the manufacturing process would cause an explosive hazard within the company confines and may cause harm to persons working with or near this material. Olin also feels that the current regulations unduly penalize their company since the incinerator does not meet current standards and since the company feels that it represents current "state of art" approach.

16.2 Reason for non-compliance - Not applicable.

16.21 Unavailability of controls - Not applicable.

16.22 Financial inability to control - Not applicable.

16.23 Need for extended time to install equipment - Not applicable.

17.0 General Comments: See 18.0 (below).

18.0 Summary Conclusions and Recommendations (Surveillance Engineer and Regional Supervisor):

Olin has had a variance from 1967-1972 for the open burning of explosive wastes. During this time, Olin has developed an incinerator which is capable of burning the explosive wastes. The incinerator is equipped with a venturi scrubber and reaches 99.7% efficiency. The stack test on this unit revealed a .04% CO_2 content. When the CO_2 is corrected to 12%, the emissions exceed the allowable. Olin feels that this situation is one which is not covered by existing regulations and that a regulation change is in order. The past year and a half, Olin has been developing this proposed rule change and attempting to follow the Agency's suggestions so that Agency concurrence can be achieved.

Olin now requests an additional year from December 13, 1974 in order to propose a rule change. The Board will have limited powers to grant a variance after May 1975.

It is recommended that the request for an additional variance be denied, or that Olin be permitted a variance during the time after the submission of the rule change, until the Board comes to a decision on the proposed rule change.

cc: Dick Pressler/DAPC